

## REMARKS

Upon entry of the amendments, claims 1-18 and 22-27 will be pending in the application. Claims 22-27 are newly added, and claims 1, 22, and 24 are in independent form. Applicants have enclosed the requisite fees for the new claims.

Applicants provide the following comments to the Office Action.

### *Abstract*

The previously filed Abstract has been canceled and replaced by that attached hereto new Abstract to address the issues raised in the Office Action.

### *Claim Rejections – 35 U.S.C. § 102*

Claims 1-21 are rejected as being anticipated by Bruder (U.S. 5,757,950). Applicants have carefully considered the rejection set forth in the Office Action and respectfully request that it be withdrawn.

Bruder discloses a process for cutting or stamping individual parts from an animal skin or material. The disclosed process clearly operates on a skin-by-skin basis. For example, Bruder discloses that the method includes “noting the contour of the complete skin and of the defective places contained in it...” (column 2, lines 6-7) (emphasis added). Bruder then discloses (at column 4, lines 19-22) that “[t]he cutting pattern is established in the computer by an optimized arrangement of the parts 7 corresponding to the contour 2’ noted, and the detected defective places 3, 4 and their quality.” (Emphasis added.)

The present invention is generally directed to a method of laying out pieces to be cut out from a flexible material, particularly where the cut out pieces are constituent parts of an article (for example and without limitation, leather pieces used to manufacture leather seating). In contrast with Bruder, the present invention uses a mask that is generic to a given type of flexible material (such as, for example and without limitation, animal hides for a given type of animal) based on the fact that a given type of flexible material (such as a given type of animal skin/hide) tends to have similar characteristics at similar locations thereon.

In addition, the present invention contemplates assigning constraints or relative values of a characteristic of the flexible material (e.g., color level) to at least some of the pieces to be cut out. Furthermore, at least some of the pieces to be cut out are linked to one another as a function of the constraints assigned to those pieces. As a result, the pieces to be cut out are arranged (i.e., laid out) automatically according to the characteristics defined by the zones of the generic mask, and the constraints assigned to the pieces and/or to the links defined between the pieces.

In view of the foregoing, Applicants respectfully submit that Bruder fails to teach or even suggest at least: “establishing, for a given type of remnant, at least one generic mask generically applicable to the given type of remnant and whose area is subdivided into zones which correspond to different value levels of a characteristic of the given type of remnant” and “applying the at least one generic mask to the image by performing dimension matching so as to subdivide the image of the individual remnant into zones having uniform characteristics” as recited in independent claim 1

Applicants acknowledge the Examiner's citation of column 1, lines 11-15 of Bruder in support of her assertion that the reference discloses a mask. However, the cited portion of Bruder, taken in isolation, is misleading with respect to the disclosure of the reference taken as a whole. For at least the reasons noted above, it is clear that the process disclosed by Bruder, including the consideration of skin quality, is performed on a skin-by-skin basis without using a generic mask that can be used with any skin in general.

In addition, Bruder fails to teach or suggest assigning a set of constraints to at least some of the pieces being cut out including a value constraint for a characteristic of the given type of remnant, as claimed in claim 1. In fact, Bruder clearly discloses that arrangement of parts 7 is based maximizing the utilization of a skin based on the contour 2' of the skin being worked on, and the defects 3, 4 uniquely present thereon. Bruder does not disclose arranging the pieces as a function of a given characteristic of the skin or a relative value thereof (such as, for example, color level).

Bruder also fails to teach or suggest defining links between at least some of the pieces to be cut out, wherein the links have different levels as a function of relationships imposed between constraints assigned to the pieces, as claimed in claim 1.

Finally, Bruder fails to teach or suggest applying a generic mask as claimed by dimension matching, as recited in claim 1.

In view of the foregoing, amended claim 1 is patentably distinguishable over Bruder. Withdrawal of the rejection based thereon is therefore appropriate. Claims 2-18 depend directly or indirectly from claim 1 and are patentably distinguishable over Bruder for at least this reason.

In addition, claims 2 and 10-12 are independently patentable over Bruder. Although the Examiner argues that column 4, lines 10-19 of Bruder teaches “characterizing the flexible material as claimed...”, Applicants point out that a full reading of the noted text reveals that Bruder in fact states:

In order to make the defective places 3, 4 clearly recognizable by the camera, they are previously suitably marked by an operator. Such a marking is effected preferably by a contrast-rich string which is placed around the defective area. At the same time, the nature of the defect can be characterized and the characterization data can be stored in the computer. Characterization information can be supplied automatically, as recognized by the computer, or manually, as recognized by the operator, for example. (Emphasis added.)

It is therefore clear that the “characterization information” in Bruder refers only to a characterization of defective places 3, 4, such that the portion of Bruder relied upon by the Examiner fails to disclose subject matter recited in claims 2 and 10-12.

Applicants traverse the rejection of claims 3, 4, and 7. Column 4, lines 20-31 of Bruder, cited by the Examiner, is silent as to a mask having zones having different values for the grain of a leather, as in claim 3; applying the claimed mask to an image of a remnant by causing reference axes associated with the mask and with the remnant respectively to coincide, as in claim 4; and determining a reference axis by analyzing an image of a digitized remnant, as in claim 7.

Applicants traverse the rejection of claims 5, 13, and 14. Column 4, lines 45-55 of Bruder, cited by the Examiner, is silent with respect to using an axis corresponding to the backbone of an animal from which a hide is taken as a reference axis, as in claim 5;

the proximity constraints defined in claim 13; and a “possible coefficient of stretching” as recited in claim 14.

The rejection of claim 6 is based on an out-of-context reading of Bruder. At column 4, lines 16-19, Bruder clearly discloses that defective places 3, 4 are marked by an operator, and not determining a reference axis by indicating or marking it manually on a remnant, as claimed in claim 6. Claim 6 is therefore independently patentable over Bruder.

Applicants also traverse the rejection of claims 8 and 9. Column 4, lines 32-44 of Bruder, cited by the Examiner in this regard, states:

For determining the degree of utilization, the area of the skin must be determined, which can be effected in the computer via the stored peripheral contour of the complete skin. The area of the individual partial contours stored in the computer is known. Accordingly, it is possible to calculate the total area of the cutting which can be obtained, so that the degree of utilization can be ascertained. Advantageously, the obtainable degree of utilization is displayed continuously on the screen 11 so that the operator receives a response as to whether the degree of utilization has actually been optimized, and whether a sufficient degree of utilization has been obtained, for determining whether further optimizing work is required.

This portion of Bruder only relates to determining “whether a sufficient degree of utilization has been obtained.” It fails to teach or suggest either that at least some pieces of a determined type of article are distributed into groups and any links between the groups and between groups and pieces are defined, as in claim 8, or that at least some of the pieces are distributed into functional groups comprising piece(s) of a sub-assembly of the article, as in claim 9. Accordingly, claims 8 and 9 are patentably distinguishable over Bruder in their own right.

Applicants traverse the rejection of claims 15 and 16. Column 3, lines 8-24 of Bruder, relied upon by the Examiner in this regard, is totally silent as to prioritizing the laying out of pieces to be cut out as recited in these claims. Claims 15 and 16 are therefore independently patentable over Bruder.

Finally, Applicants traverse the rejection of claims 17 and 18, which relate to the identification of a degree of seriousness of a flaw present in the material being operated on. Although Bruder does disclose identifying the presence of defective places 3, 4, the reference provides no teaching or suggestion as to identifying the degree of seriousness of such defective places. Accordingly, claims 17 and 18 are patentably distinguishable over Bruder for at least this reason.

#### ***New Claims***

Applicants respectfully submit that new claim 22 is allowable in view of the cited prior art. Bruder fails to disclose “establishing a generic mask”. Applicants also respectfully assert that claim 23 would be allowable based upon its dependency from claim 22.

New claim 24 is directed to a method for automatically laying out pieces to be cut out from an animal hide having non-uniform characteristics over its area. Claim 24 is patentably distinguishable over the relied upon prior art for reasons similar to those set forth relative to claim 1. Claims 25-27 depend from claim 24 and are patentable at least for this reason.

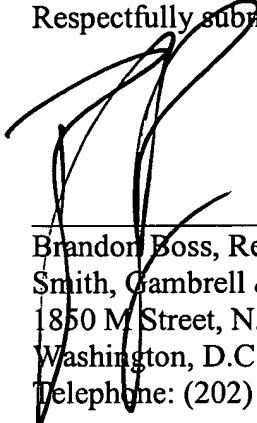
## CONCLUSION

Applicants respectfully assert that the application should be allowed. If any additional fees are due in connection with the filing of this response, such as fees under 37 C.F.R. §§ 1.16 or 1.17, please charge the fees to Deposit Account No. 02-4300. Any overpayment can be credited to Deposit Account No. 02-4300.

Respectfully submitted,

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Signature:



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\* Mr. Boss limits his practice to matters and proceedings before federal courts and agencies. He is not a member of the District of Columbia bar, but he is a member of the state bar of Louisiana and is a registered patent attorney.